



Water Quality Program Semi-Annual Update

Planning Committee
October 8, 2024

Overview

- Regulations and Internal Goals
- Lead Programs
- PFAS
- Other Issues

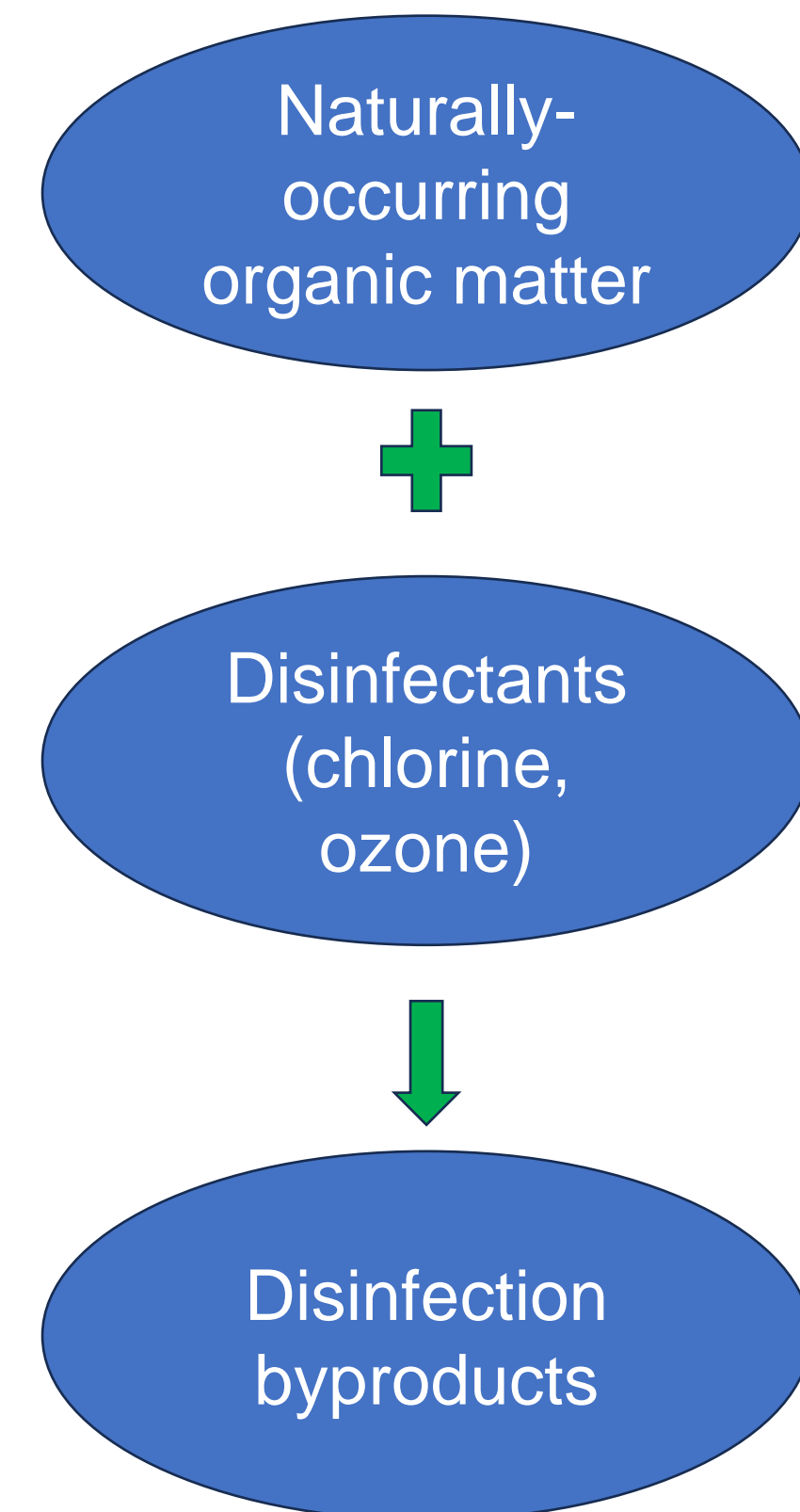
Water Quality Update

- First six months of 2024
- Met all state and federal drinking water regulations
- Met 98% of internal water quality goals
 - Significantly more stringent than regulatory requirements
 - 124 of 127 internal goals were met
 - Unmet goals associated with disinfection byproducts

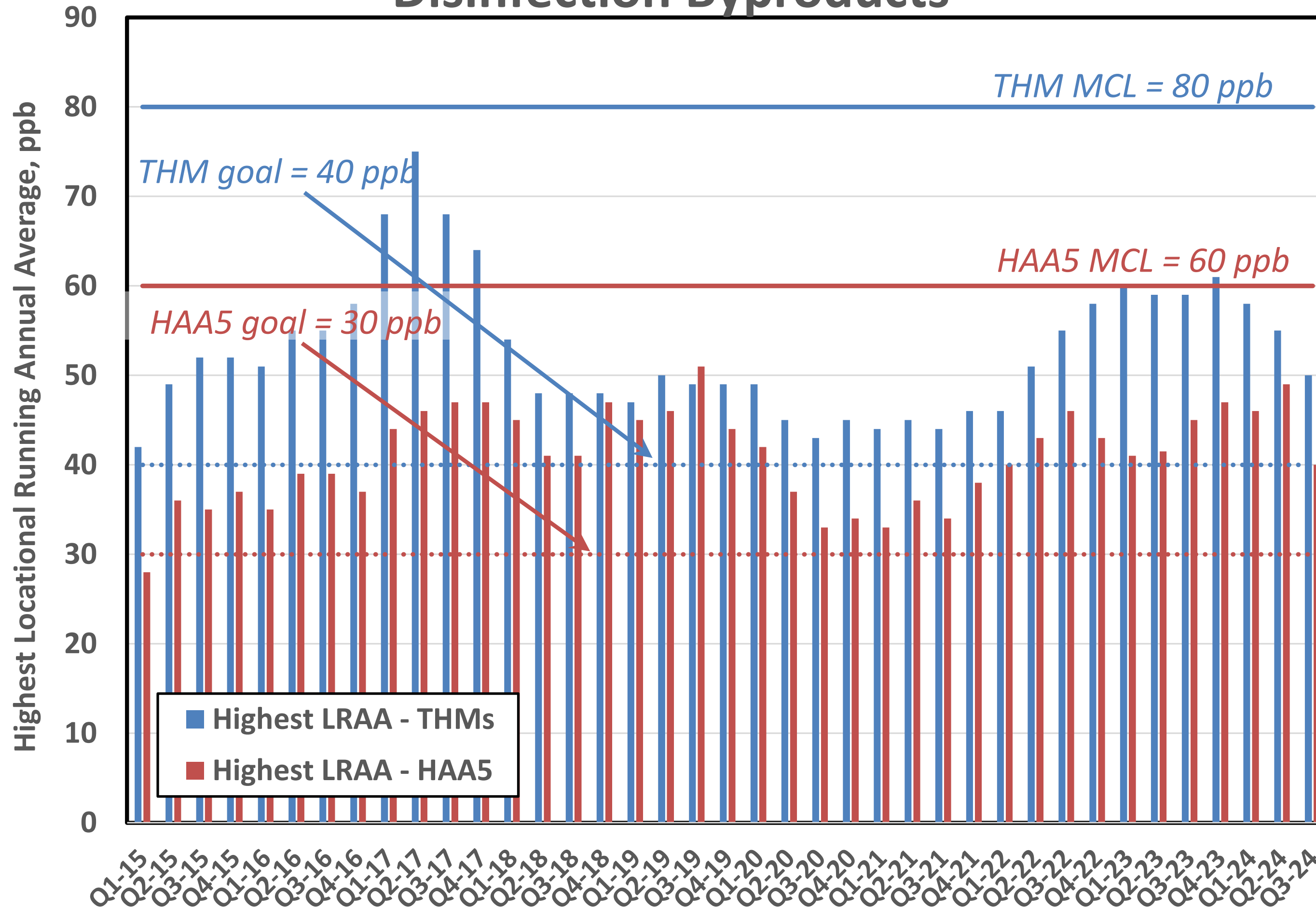


Disinfection Byproducts

- Trihalomethanes (THMs)
 - 4 of 32 samples exceeded internal goal
- Haloacetic Acids (HAAs)
 - 5 of 32 samples exceeded internal goal
- N-Nitrosodimethylamine (NDMA)
 - 2 of 10 samples exceeded internal goal



Disinfection Byproducts



MCL = Maximum Contaminant Level

Lead Programs

Sample voucher program continues

- Over 4,200 customers have participated since inception in 2017
- Ninety percent of results are 1 ppb or less

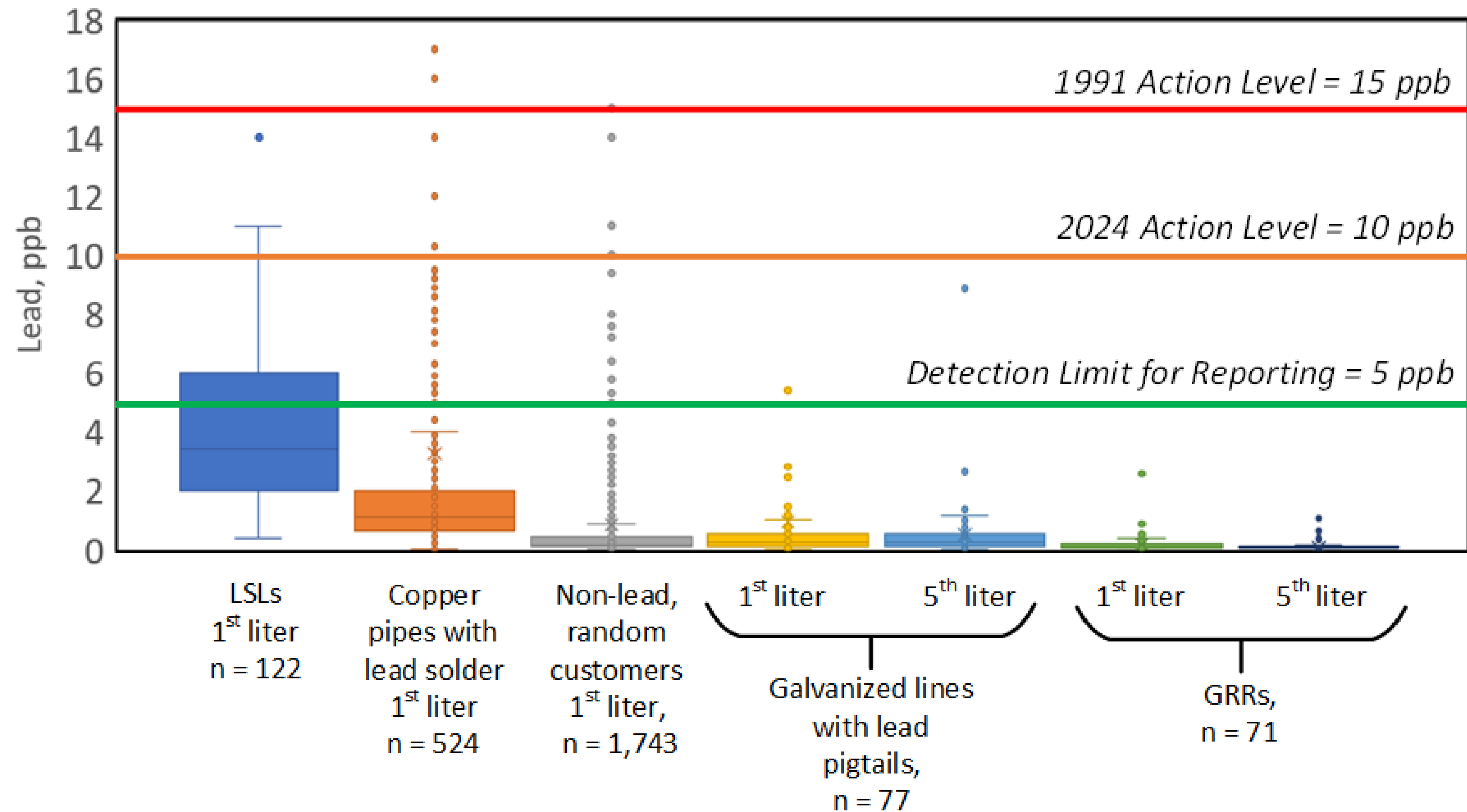
State and federal service line inventory requirements

- All lead service lines (LSLs) have been removed (historically had about 7,500)
- Nearly all lead fittings have been removed (about 320 left, historically had tens of thousands)
- Inventories submitted to state and available on District public website next month
- Notification of customers at former LSL sites with current galvanized lines



Customer collecting lead sample

EBMUD Customer Tap Sample Lead Results, 1992-2024



- Lead components (pipes, solder, and fittings) impart lead into water
- GRRs do not impart lead into water in the District's system

PFAS

- New federal regulations for six compounds in April 2024

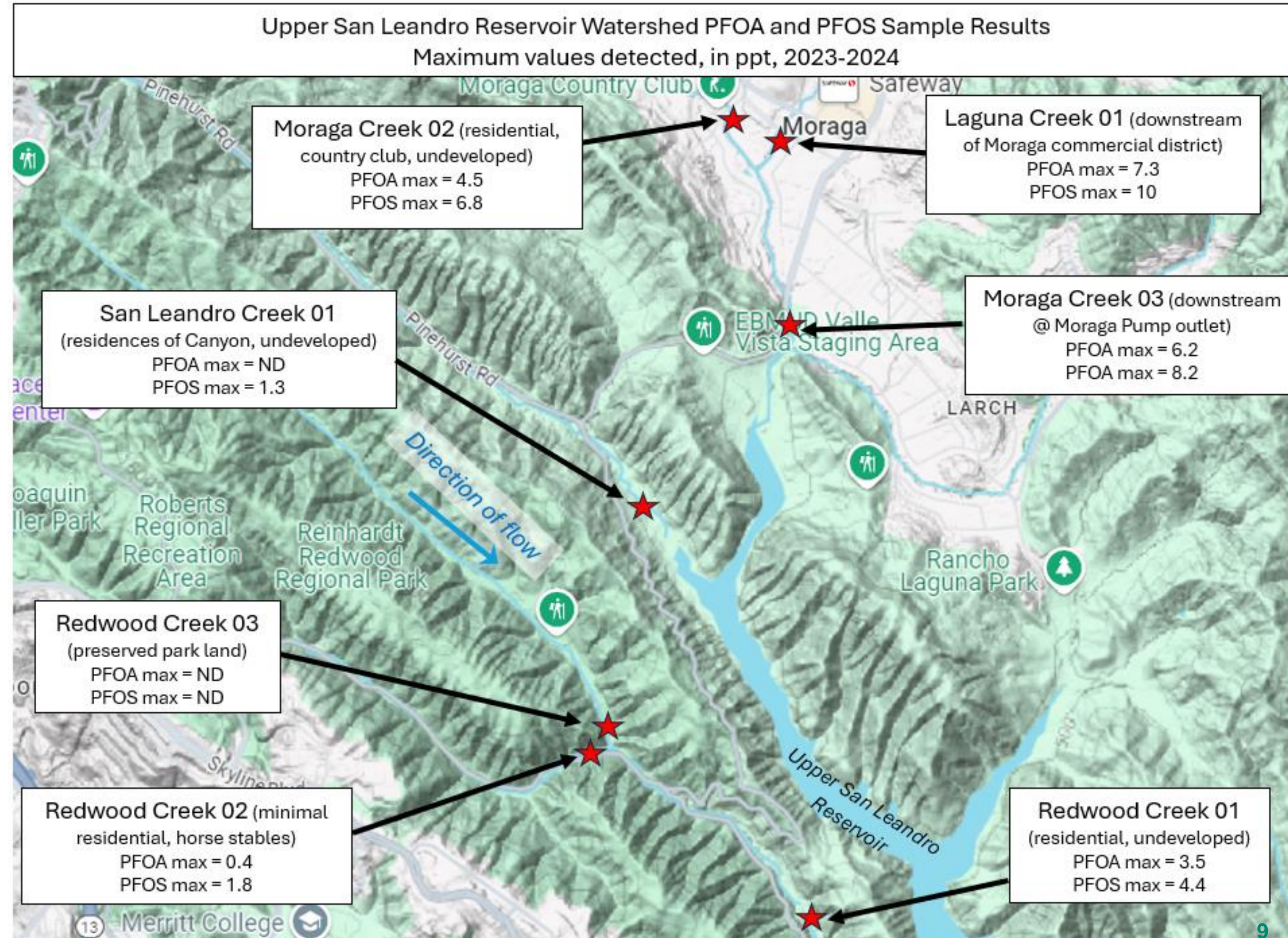
Compound	Maximum Contaminant Level (ppt)	Minimum Reporting Level (ppt)	Health based value (ppt)	Hazard Index (unitless)
Perfluorooctanesulfonic acid (PFOS)	4	4		
Perfluorooctanoic acid (PFOA)	4	4		
Perfluorononanoic acid (PFNA)	10	4	10	1.0
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10	5	10	
Perfluorohexane sulfonic acid (PFHxS)	10	3	9	
Perfluorobutane sulfonic acid (PFBS)		3	2,000	

- All results from EBMUD Water Treatment Plants during 2023-2024 were below reporting limits

*PFAS = Per- and Poly-fluoroalkyl Substances
ppt = parts per trillion*

Raw Water Samples

- Monitoring from individual creeks in the watersheds
- Some measured levels are above the new MCLs
- Dilution with water from non-impacted creeks is important
- Treatment plant modification for PFAS removal not warranted at this time



Fluoride

- Fluoride is added to water to improve dental health
- Fluoridation of water ensures that everyone receives benefits, especially those from marginalized communities, who have less access to dental care
- Municipal Utility District Act allows water districts to add fluoride if majority of voters approve (approved by voters in 1974 and again in 1980)
- Fluoride has been added to EBMUD water since 1976

Fluoride – Recent Studies

- National Toxicology Program, part of the National Institutes of Health published a study of fluoride's health impacts
- High quality compilation, review, and analysis of numerous studies
- Conclusion was that fluoride may be harmful
 - Impact is generally observed at high levels (more than double EBMUD levels)
 - Evidence is considered “moderate”
 - Too much fluoride during pregnancy may “negatively affect children’s cognition and neurodevelopment”
- Existing MCL is 2 mg/L; California regulations require levels between 0.6 and 1.2 mg/L, with an “optimal” value of 0.7 mg/L
- EBMUD levels between 0.6 mg/L and 0.8 mg/L

Fluoride – Recent Ruling

- The Toxic Substances Control Act (TSCA) allows the EPA to regulate chemicals that pose risks to human health or the environment
- Petition was submitted in 2017 asking EPA to ban fluoridation under TSCA
- US District Court for the Northern District of California ruling in 2024: EPA must “initiate rulemaking” under TSCA
- EPA must examine potential harm from fluoride and determine how to respond
- Court order does not dictate EPA’s response, EPA must address the risk under TSCA framework

Questions?



**FLOWING
INTO
THE
FUTURE**



Backflow Prevention Program Update

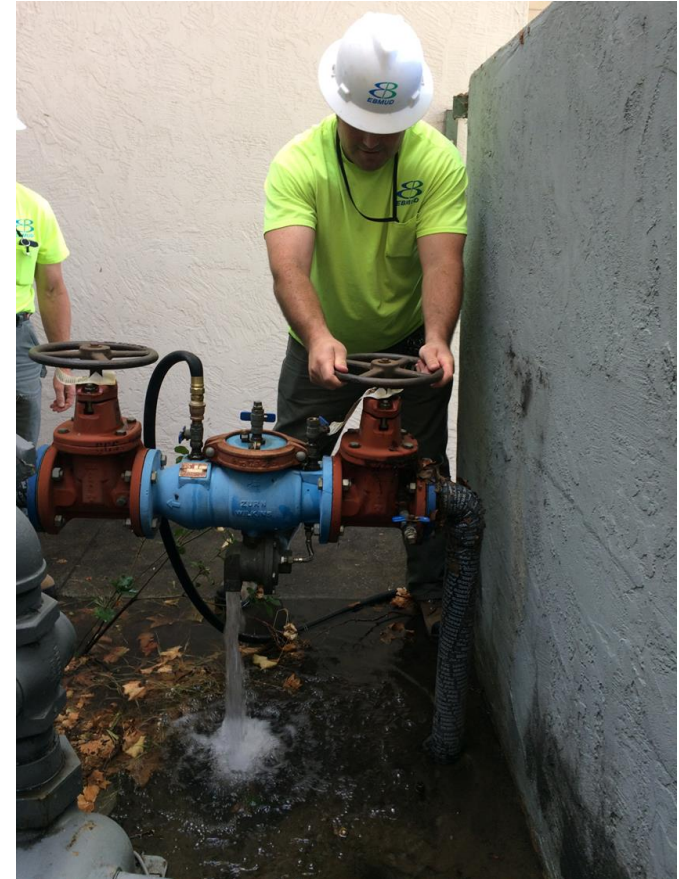
Planning Committee
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Backflow Protection Program

- California's Safe Drinking Water Act requires public water systems ensure that the distribution system will not be subject to backflow from backpressure or back siphonage
- District conducts hazard assessments to identify actual and potential hazards, applies principles of backflow protection and prevention, and implements cross-connection control policies and procedures
- California State Water Board, Division of Drinking Water (DDW) requires the District to track and ensure that the approximately 18,800 backflow prevention assemblies (BPA) installed on private properties are tested annually by a certified backflow tester

Survey Program Summary

- District has been surveying for cross-connection control for over 40 years
- A survey is an on-site assessment by a certified cross-connection control specialist to confirm the need and type of backflow prevention assembly (BPA) required
- If hazards are observed, a BPA must be installed and tested annually
- A survey is initiated whenever a commercial account changes ownership, a new service is requested or an upgrade to a service warrants a survey. Approximately 1,000 surveys are completed annually



District staff working on a backflow prevention assembly

Cross Connection Control Policy Handbook Regulations

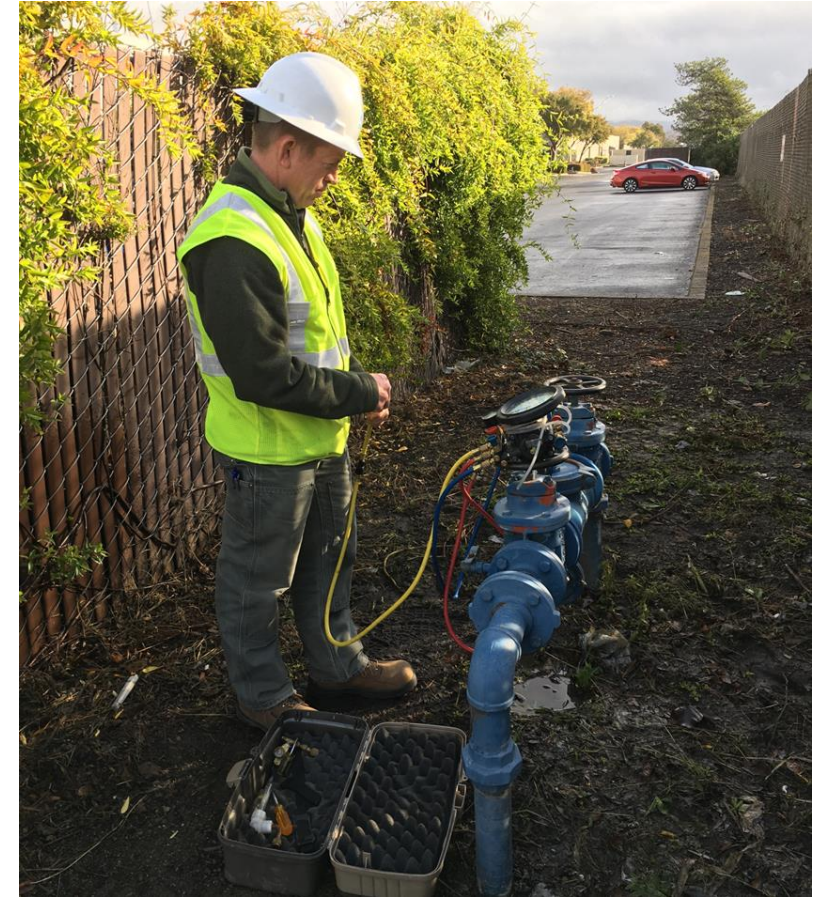
- In December 2023, the State Board adopted a new Cross-Connection Control Policy Handbook to expand existing regulations for cross-connection control as mandated by AB1671 to address evolving water quality standards and cross connection technologies
- By July 1, 2025, all public water systems must develop a detailed *Cross Connection Control Plan* to describe how they will comply with the new requirements

Overview of New Requirements

- Updated requirements for when BPAs are required
- More frequent hazard assessments (re-surveying)
- New certification requirements for BPA testers and cross connection specialists
- Development of a backflow incident response plan
- Public outreach and education program
- Increased coordination with City and County planning departments to ensure compliance with new backflow requirements as part of their building permit and inspection processes

Impacts to Residential Accounts

- Existing backflow requirements for auxiliary water supplies (e.g., wells)
- Per Section 26 of the District's Regulations Governing Water Service (Section 26)
 - Approximately 4,600 BPAs on residential services are tested annually and maintained by the District
 - BPAs, in many circumstances are installed at the District's expense



District staff working on a backflow prevention assembly

Impacts to Residential Accounts

- BPA required if an in-line pump is used to increase water pressure
- Since 2010, Uniform Plumbing Code requires fire sprinklers for new and remodeled houses (estimate 6,000 homes).
- BPA may be required for residences with fire sprinklers
- Residence with a fire sprinkler system may need a hazard assessment



A residential fire sprinkler (AI Generated Photo)

Impacts to Residential Accounts

- BPA may be required for residences with swimming pools
- Staff estimates 10,000-30,000 swimming pools may need to be assessed
- Staff will work with local permitting agencies to determine whether building inspections confirmed a BPA installation



Swimming pool (photo credit: C. Yezman)

Impacts to Dedicated Fire Service Laterals

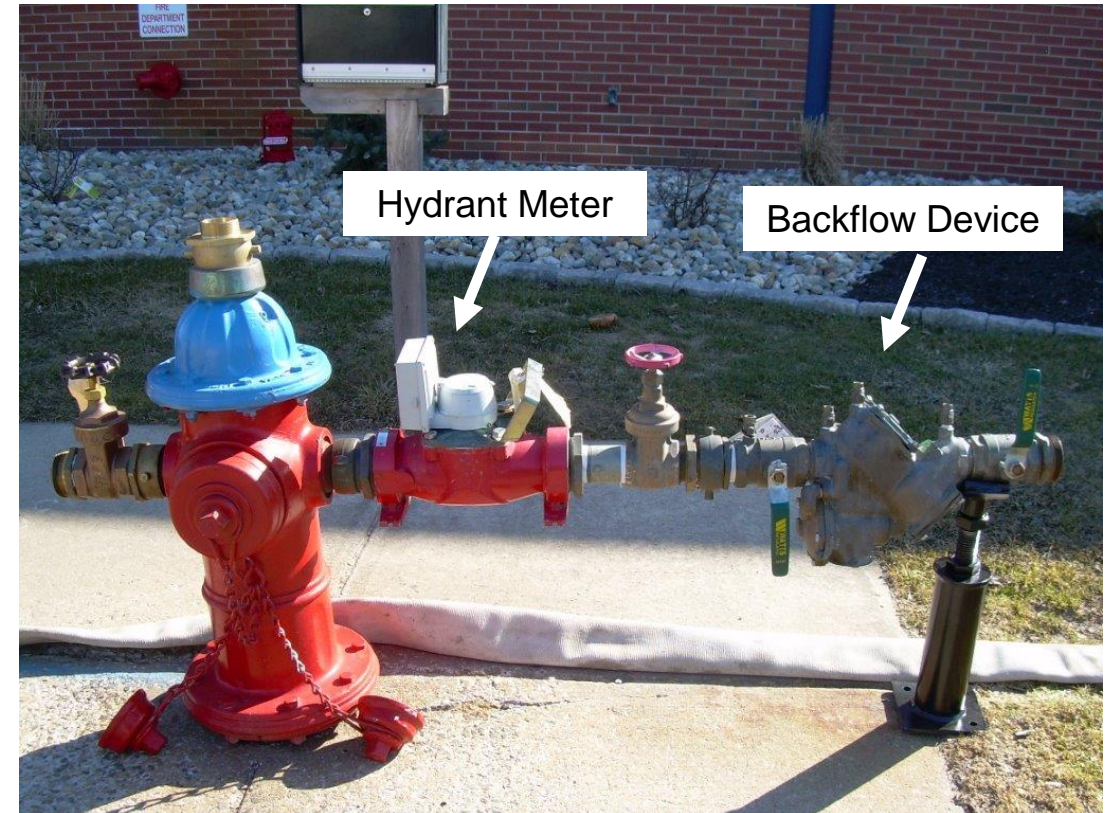
- Upgraded BPAs needed for dedicated fire service laterals
- Up to 4,000 dedicated fire services installed prior to 2019 may need to be upgraded
- Upgraded BPAs result in a higher pressure drop and may require upsizing the service lateral or installing a private fire pump
- BPAs for dedicated fire service are installed and maintained by the customer per Section 26 and are typically only installed for larger buildings or developments



A backflow prevention assembly

Contractor Issued Hydrant Meters

- District owns 700 hydrant meters with internal check valves for backflow protection
- New regulations may require a higher level of protection
- District may need to retrofit all hydrant meters with BPAs



*A construction hydrant meter with a backflow prevention assembly.
(Photo credit – Metropolitan District, Hartford, Connecticut)*

New Requirements to Re-Survey

- Surveying for hazards applies to commercial and residential services
- DDW may require properties with BPAs to be re-surveyed regularly (frequency yet to be defined). A re-survey is more extensive than an annual BPA test.
- Staff will work with DDW to quantify appropriate intervals and will prioritize:
 - High risk businesses utilizing chemical and biological contaminants
 - Low pressure services with booster pumps
 - Locations that have not been re-surveyed for 20 years or more



District staff working on a backflow prevention assembly

Section 26 Background

- Section 26 allows District to require backflow prevention and actions to deny service if a customer does not comply
- Section 26 stipulates ownership of backflow devices
 - Commercial customers and customers with dedicated fire service laterals are required to pay for installation, testing, and maintenance of any BPA
 - For residential accounts, the District (at its cost) installs, tests, and maintains the BPAs, except in cases of known backflow events
- Section 26 does not address ownership of residential BPAs other than for private wells tied into the domestic water system

Revisions to Section 26

- Additional cost to the District could range from \$20 million to 300 million due to the State's new Cross-Connection Control Policy Handbook
- Staff will provide options for the Board to consider regarding cost assignment for residential BPAs (installation, maintenance and annual testing)
- Commercial customers and customers with dedicated fire service laterals will continue to pay for installation, testing, and maintenance of BPAs
- Other revisions are required to Section 26 such amending citations to CA statute and including fees for re-surveying

Next Steps

- Staff will work with DDW to develop cost effective ways to meet new requirements of CCCPH for the District and customer that are protective of public health
- Staff will meet with DDW in November 2024 to discuss specific elements of the District's draft Cross-Connection Control Plan
- Staff will report back to the Board in 2025 on the requirements and resource needs to implement the updated program
- Any modification to Section 26 will be brought to the Board for consideration during the Fiscal Year 2026/2027 budget process

Questions?





Placer County Water Agency (PCWA) - EBMUD Partnership Update

Planning Committee

October 8, 2024

Sacramento Water Forum Agreement

- Water Forum Agreement (WFA)
 - Historic coalition formed in 2000 by local governments, water agencies, environmental NGOs, public entities, businesses and others
- WFA committed to co-equal goals:
 - Provide reliable and safe water supply for region's economic health and planned development to the year 2030
 - Preserve fishery, wildlife, recreational, and aesthetic values of Lower American River
- Successor agreement (Water Forum 2.0) is being negotiated to extend to year 2050 and address new challenges (climate change, SGMA, fisheries, etc.)
 - EBMUD participating in Water Forum 2.0 development

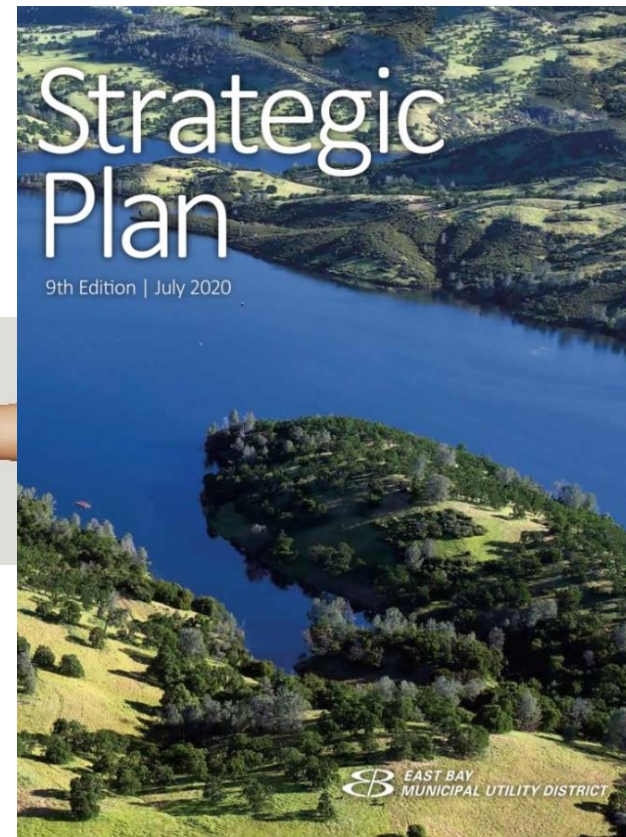


PCWA-EBMUD Partnership (MOU Since 2013)

PCWA Water Forum Objective:
Protect the River and Water Supply



Placer County Water Agency



EBMUD Strategy 1:
Preserve entitlements and obtain supplemental supplies - *Water Transfers*

Project Concept

- Water released by reservoir reoperation of PCWA's Middle Fork Project
- Released in dry years for environmental benefits to Lower American River
 - To improve spawning habitat for salmonids through higher flows and lower river temperatures
- Diverted at Freeport by EBMUD as supplemental supply



PCWA-EBMUD Long-Term Partnership

- Goal: Develop long-term agreement to purchase PCWA's Water Forum environmental releases
 - PCWA to release 10,000–47,000 acre-feet (AF)/year during dry years
 - EBMUD receives first right-of-refusal to purchase the releases
- EBMUD purchased 37,000 AF of supplemental supplies
 - 2014, 2015, and 2022
- PCWA leading environmental review and permitting efforts
 - CEQA and NEPA analysis
 - Long-term Warren Act Contract (USBR) for use of Folsom Reservoir and Folsom South Canal
 - PCWA's American River Water Rights Extension (SWRCB)
- EBMUD to share 20% of the costs for environmental review and permitting



Placer County Water Agency

EBMUD Supplemental Supply Strategy

- Central Valley Project (CVP)
 - Permanent contract with USBR
 - Unique contract with USBR – qualify in dry years only
 - Up to 165,000 AF in 3 consecutive dry years
 - Allocations reduced to 25% in 2015 and 2021, and 0% in 2022
- Water Transfer Program (Long/Short-Term)
 - Long-term water transfer agreements
 - Placer County Water Agency (PCWA): Up to 47,000 AF
 - Yuba County Water Agency (YCWA): Up to 25,000 AF
 - Short-term transfers available from Sacramento River Settlement Contractors



Freepoint Intake

Key Takeaways

- 1 CVP supplies are less reliable
- 2 PCWA is currently the largest component of the District's water transfer program

History of PCWA-EBMUD MOU

Milestone	Need for Amendment	Total Cumulative Project Cost (EBMUD Total Cumulative Share)
2013 – Original MOU signed	Developed a long-term water transfer project	\$4,715,000 (\$943,000)
2014 – Amendment #1	Addressed matters associated with the 2014 transfer	No increase
2017 – Amendment #2	Revised fixed price of transfer water in MOU to reflect market conditions	No increase
2018 – Amendment #3	New CVP biological opinions required additional work on temperature modeling of Folsom Reservoir and American River	\$7,070,000 (\$1,319,700)
2024 – Amendment #4 (Proposed)	Additional work required to complete Long-Term Warren Act Contract, CEQA and NEPA analysis, and PCWA water rights extension (EBMUD’s additional share of \$360,000)	\$8,870,000 (\$1,679,700)

Staff Recommendation

- Support proposed Amendment #4 to PCWA-EBMUD MOU to increase the EBMUD contribution by \$360,000 not to exceed a new maximum amount of \$1,679,700 in total EBMUD contributions
- Board will consider approval of Amendment #4 at its October 22, 2024 meeting

Questions?

